

**What is claimed is:**

1. A method of fabricating a MOSFET comprising:  
forming a polysilicon gate electrode on a semiconductor substrate;  
forming a first doping layer on an area of the semiconductor substrate,  
the area including the polysilicon gate electrode;  
implanting dopant into the first doping layer by means of a high-tilt  
angle pocket ion implantation;  
forming LDD regions on a surface of the semiconductor substrate at  
two sides of the polysilicon gate electrode by diffusing the dopant of the first doping  
layer into the semiconductor substrate;  
forming an insulating layer on the first doping layer by diffusing the  
dopant of the first doping layer into the semiconductor substrate;  
forming a spacer by etching the insulating layer and the first doping  
layer;  
forming a second doping layer on the semiconductor substrate and the  
polysilicon gate electrode with the spacer; and  
forming a source region and a drain region on <sup>a</sup>the surface of the  
semiconductor substrate at both sides of the polysilicon gate electrode with the spacer  
by conducting a thermal treatment process so that the dopant of the second doping  
layer <sup>is</sup> can be diffused into the semiconductor substrate.
2. A method as defined in claim 1, wherein said semiconductor substrate  
comprises Si, GaAs or silicon-on-insulator.